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November 26, 1975

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Attached is a draft Environmental Impact Statement (E.I.S.) for the proposed sale of oil and gas leases on fourteen tracts of state land in Flathead County, Montana. The tracts are located within the Coal Creek State Forest and represent a total of 7,759.18 acres. Oil and gas leases on these tracts are tentatively scheduled for sale by competitive bid on March 2, 1975.

TED SCHWINDEN
COMMISSIONER

This draft E.I.S. represents a cooperative effort between the Department of State Lands, (lead agency), and the Montana Department of Natural Resources and Conservation (D.N.R.C.). State lands designated as State Forest are managed cooperatively by the Forestry Division of the D.N.R.C. and the State Land Board. Oil and gas leasing for all state owned land is administered by the Department of State Lands.

This draft E.I.S. is being distributed for public and agency review in compliance with Section 69-6504(b)(3) of the Montana Environmental Policy Act. If the need for a final E.I.S. is indicated, responses to the draft will be included.

All comments should be submitted to the Environmental Coordinator, Department of State Lands, Capitol Station, Helena, Montana, 59601 by December 26, 1975.

Sincerely,

Brace Hayden

BRACE HAYDEN
Environmental Coordinator
Department of State Lands

BH:pc

Attachment

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DRAFT ENVIRONMENTAL IMPACT STATEMENT

PROPOSED OIL AND GAS LEASES
COAL CREEK STATE FOREST

MONTANA DEPARTMENT OF STATE LANDS
(Lead Agency)
and
MONTANA DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

Submitted pursuant to
Montana Environmental Policy Act
Section 69-6504 (b) (3)

November 1975

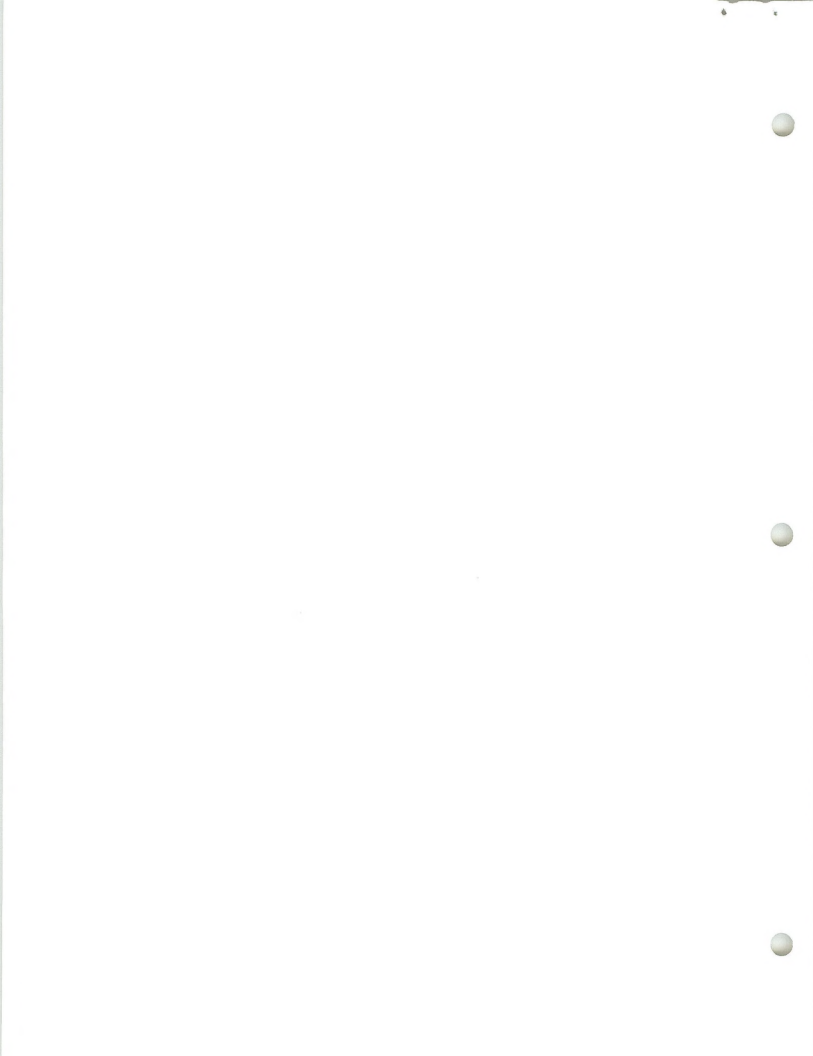


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I. INTRODUCTION

A. Federal Applications

In the fall of 1974, and in accordance with the federal Mineral Leasing Act of February 25, 1920, applications for oil and gas exploration and development leases on approximately 236,000 acres of National Forest land were made to the Bureau of Land Management. These lease applications, which are for lands in Flathead County located near both the North and South Forks of the Flathead River, were submitted by three parties, with most of the land applied for by Texas Pacific Oil Company.

Although the Bureau of Land Management is the agency responsible for the actual issuance of the leases, the U.S. Forest Service is responsible for managing surface resources on National Forest lands. Consequently, by letter of agreement between the Departments of Interior and Agriculture, the U.S. Forest Service was afforded the opportunity to provide recommendations concerning stipulations to an oil and gas lease. Such stipulations were to be those which would protect other resource values if the leases were granted.

In finalizing its recommendations, the U.S. Forest Service, Flathead National Forest, prepared a Draft Environmental Impact Statement. The action evaluated in the federal statement, entitled Oil and Gas Lease Applications Exploration and Development and issued on June 19, 1975, consisted of the U.S. Forest Service's recommendations to the Bureau of Land Management. Those recommendations are:

- (1) Granting leases with surface occupancy on 111,954 acres,
- (2) Granting leases without surface occupancy on 53,727 acres,
- (3) Holding lease applications on 16,996 acres until land use plans for these sections are completed, and
- (4) Denying leases on 53,323 acres.

B. State Applications

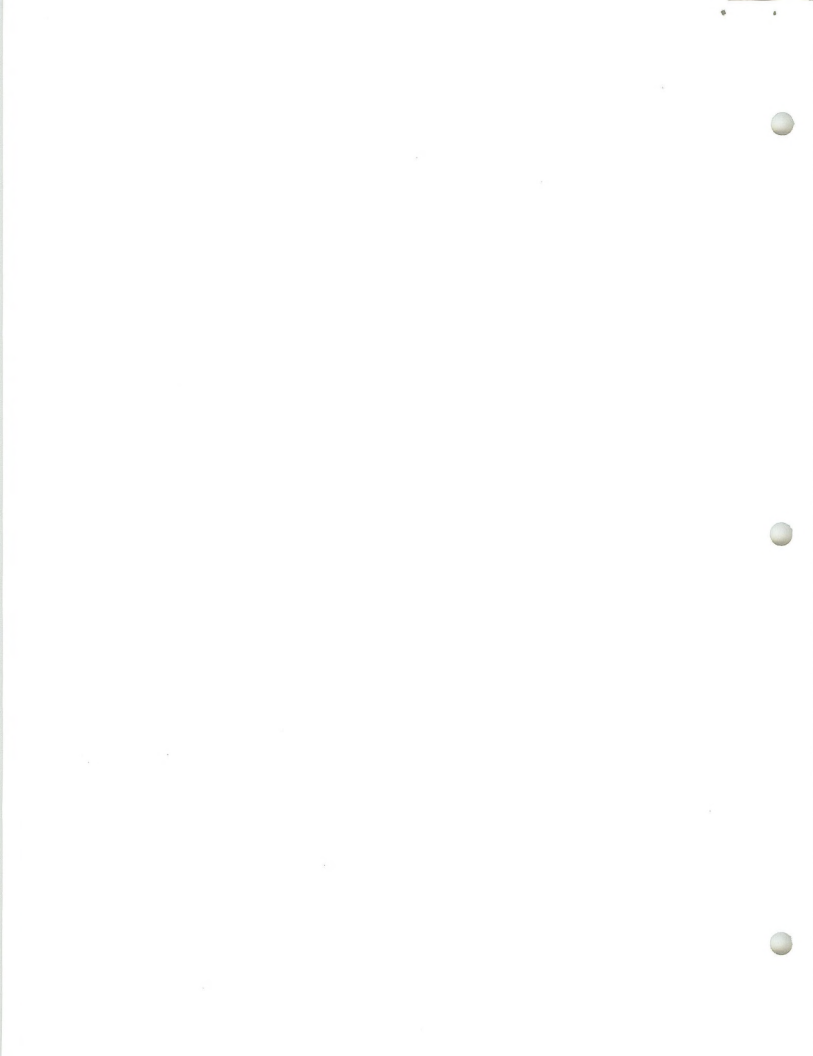
On April 29, 1975, the Montana Department of State Lands (DSL) also received applications from Texas Pacific Oil Company for oil and gas leases on fourteen tracts of State Forest land in Flathead County, near the North Fork of the Flathead River. These tracts, consisting of 7,759.18 acres located within Coal Creek State Forest, are bounded on three sides by the proposed

federal lease tracts located near the North Fork of the Flathead River (see Location Map, Figure 1).

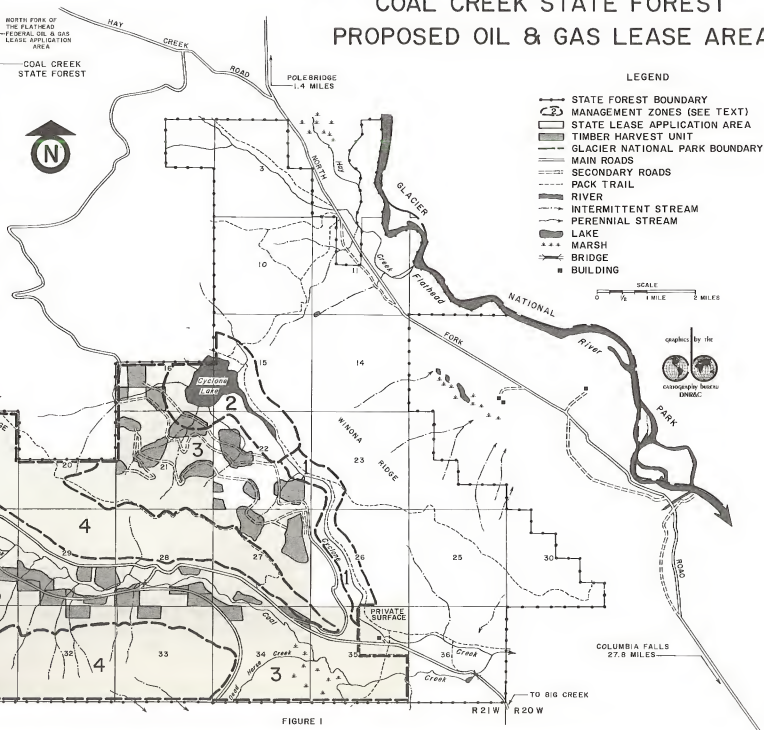
The tracts were rejected by DSL for a possible June 3, 1975, sale, because the proposed leasing constitutes a major, significant action under the provisions of the Montana Environmental Policy Act. Consequently, preparation and circulation of an environmental impact statement (EIS) are necessary parts of the decision-making process.

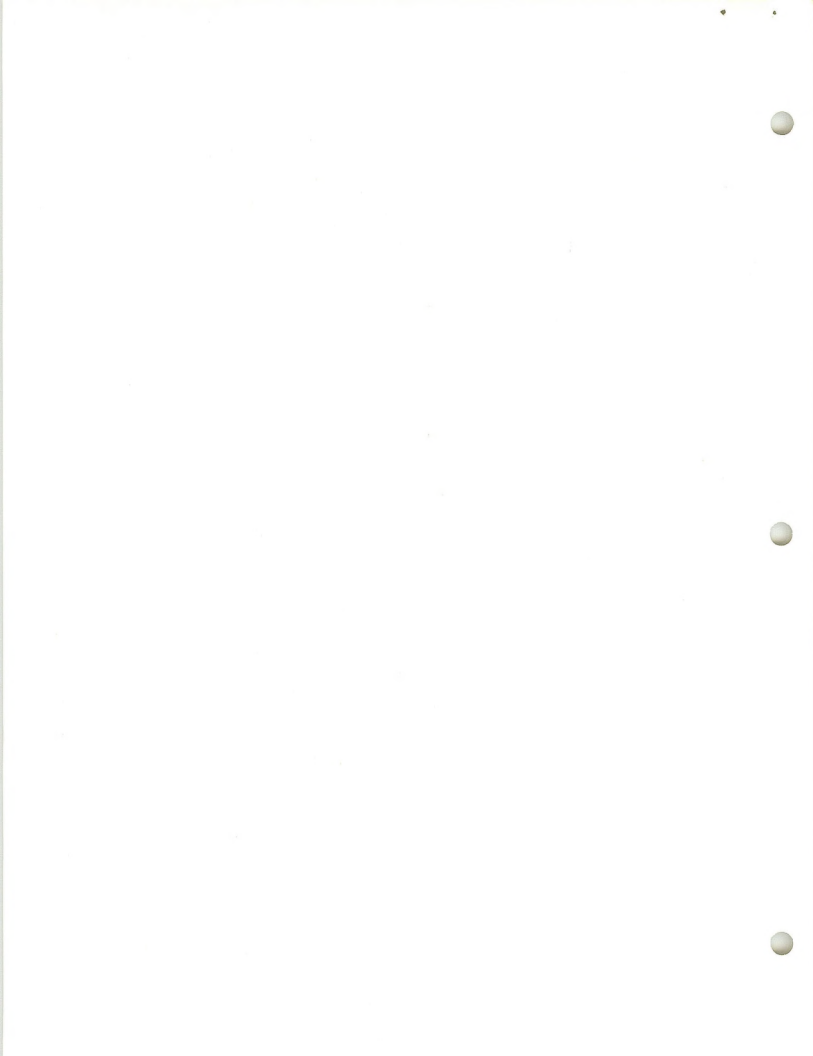
In considering the proposed federal lease area (approximately 30 times greater than the state area), the federal Draft EIS deals with the broader impacts of an oil and gas exploration and development program. In addition, according to the federal statement, if substantial oil and gas reserves are discovered, there is a strong possibility that an additional federal impact statement will be written.

Consequently, the following state assessment, which focuses upon the impacts of oil and gas leasing upon the state land involved, should be considered an extension of that made by the federal government. The reader is referred to the U.S. Forest Service's impact statement for a discussion of the broader impacts in the Flathead area, for DSL and the Department of Natural Resources and Conservation (DNRC) adopt that analysis as the basis for the following evaluation.



COAL CREEK STATE FOREST PROPOSED OIL & GAS LEASE AREA





II. DESCRIPTION OF THE PROPOSED ACTION

A. Action Proposed by Applicant

1. Lease Area

Coal Creek State Forest consists of about 15,000 acres within the North Fork of the Flathead River drainage. The forest is located approximately thirty road miles north of Columbia Falls and for a short distance shares a common boundary (the Flathead River) with Glacier National Park (see Figure 1).

That portion of the State Forest included in Texas Pacific Oil Company's lease applications is about four miles east of the Flathead River and involves fourteen tracts of land totaling 7,759.18 acres. One hundred and sixty of these acres (NE $\frac{1}{4}$, Section 35) were sold in 1912. The state, however, retained mineral rights to this quarter section, and, consequently, it has been included within the lease application area.

2. Applicant

Texas Pacific Oil Company is an oil and gas exploration and development company and a wholly-owned subsidiary of J. E. Seagram Co., New York; J. E. Seagram Co., in turn, is a wholly-owned subsidiary of the J. E. Seagram Distillery of Montreal, Canada. The headquarters for the company is in Dallas, Texas, with field offices situated in Calgary, Alberta; Lafayette, Louisiana; Oklahoma City, Oklahoma; and Midland, Texas.

The fourteen lease applications¹ discussed in this impact statement are the responsibility of the company's Calgary District Office. They were submitted by Maxine C. Amick of Billings, Montana, who is acting as a lease broker for Texas Pacific Oil Company.

1. As required by the State of Montana, a separate lease application must be filed for each section of land, or portion thereof, involved. In this instance, fourteen separate and contiguous sections of land, or portions thereof, are sought.

To the north of the area, in Canada, Texas Pacific has discovered oil and gas in geologic substructures. In general, the studies in the Flathead are a continuance of the company's work in Canada. Through seismographic means, the company is looking for similar large, dome-shaped geologic substructures that often contain hydrocarbons.² In consideration of the current prices for gas and oil, the company is willing to invest substantially in the determination of whether or not such reserves exist in the North and South Fork vicinity.

If the necessary state leases are obtained, Texas Pacific will either contract or undertake themselves all phases of the oil or gas operation, including exploration, development, production, refining, and marketing. Part ownership may be sold to another company in return for investment capital.

3. Proposed Use on State Land

Texas Pacific has initiated the lease procedure for land within Coal Creek State Forest in order to explore for and develop any oil and gas deposits within the area. The leases are being sought prior to any certain knowledge that oil- and gas-bearing structures are, in fact, present. (The company has acknowledged that the possibility of a marketable find is low, although not so low as the 1:150 probability stated in the federal Draft EIS.) This fact, the fact that the requested action is area specific (not site specific), and the fact that the requested action is sequential (each step being dependent upon success at the preceding step) make the actual use that will occur highly speculative.

Texas Pacific hopes to begin exploration activity in the Flathead area in the spring or early summer of 1976. The exact starting date for such exploration is dependent upon a) when and if the federal and state leases are issued, and b) the condition of the area's roads. If the leases are issued, exploration activity will start as early as the roads are sufficiently dry to accommodate heavy truck traffic.

2. See pages 33 and 34 of the federal Draft EIS for a more detailed discussion.

Generally, the following procedure is used by the applicant in exploring for and developing oil or gas.

(1) Preliminary Evaluation of the Area's Potential to Produce Oil and Gas.

Aerial photos and existing geological information are used to determine the presence of generally suitable geological structures which may be capable of trapping oil and gas. This step, which required no permission or actual use of the forest, has been completed by the applicant and has resulted in the decision to proceed with the leasing phase.

(2) On-the-Ground Exploration, Utilizing Several Techniques to Confirm That Sufficient Commercial Quantities of Oil and Gas are Present.

This step involves two major phases:

(a) Detailed examination of selected geologic surface features and seismic evaluation of the geologic structure of the area--

This phase basically involves the application of seismographic methods of delineating geologic substructures which may contain oil or gas fields. Vibrator trucks, very sensitive shock recorders (geophones), and computers are used.

This approach is more expensive than the older method of seismographing--exploding dynamite in deeply-drilled holes and recording the effect of the resultant shock wave. However, the applicant has indicated that the results of the newer system are substantially more accurate, since the vibrator trucks create a more precise shock wave than does an explosive charge.

Initially, several miles of conductive cable are strung along roads or trails. The shock-sensitive geophones are

permanently attached to this cable at about 18-foot intervals. After the cable is in place, several special vibrator trucks are moved to a pre-established location and set up to generate the necessary shock waves. Large hydraulic pads are then lowered from the trucks until they support the trucks' weight.

Once in position, the pads under each truck are vibrated simultaneously, which transmits nondestructive shock waves deep into the crust of the earth. These shock waves strike the various subsurface formations and rebound differently, depending upon the nature of the geologic feature. The return shock waves are picked up by the geophones and transmitted along the cable to computers in a nearby recording truck. Following a brief vibrating period, the vibrator trucks are moved a short distance, and the process is repeated.

The applicant has informed the state that existing roads within Coal Creek State Forest would be adequate for the initial seismic reconnaissance and probably sufficient for additional detailing work that may be needed before any exploratory drilling. If not, the applicant may propose the clearing of additional 14-foot-wide strips.

Once the seismographing is completed in an area, the computer records are interpreted by geophysicists who develop subsurface geology maps and identify areas capable of trapping hydrocarbons. These data can only indicate if promising areas are present. It is, therefore, at this point that the applicant must determine whether the seismic evaluations are sufficiently promising to warrant the drilling of exploratory wells to establish the possible existence of an oil or gas field.

- (b) Drilling of one or more exploratory wells to confirm the presence of commercial quantities of oil and gas.—This phase would require the construction of one or more drilling sites ranging from two to six acres. Leveling of the site in order to provide a flat surface for the drill rig would require approximately 1/10 acre; slope alterations might be necessary to make the remainder of the site sufficiently level for safe and efficient operation. If the drill site is not served by a road, access roads might be required. Depending on the evaluation of the drilling results, the applicant must decide to discontinue drilling, convert the existing exploratory well(s) into development well(s), or drill additional production wells.
- (3) Development of Oil and Gas Discovery into Actual Commercial Production, and Construction of Drilling Sites for Production Wells.

The possible requirements of this phase are roads, conversion of existing exploratory wells into production wells, construction of storage tanks, construction of a collecting pipeline system with a pumping station, upgrading or improving maintenance on existing roads to provide year-around access, construction of small local power generating sites or a power line to serve the field, and establishment of a small, local administrative and service site.

An oil and gas lease would grant the lessee the right to build "...other structures where necessary to remove and dispose of the oil and gas." Representatives of Texas Pacific Oil Company have indicated that it is unlikely that structures beyond the usual pumping stations, storage tanks, and pipelines would be necessary, even if large quantities of oil and gas were discovered.

(4) Exhaustion and Abandonment of Production Wells.

This stage would involve those actions necessary to close down existing wells and related facilities, remove structures, close applicant constructed roads, and rehabilitate drilling sites, storage tank sites, pipeline rights-of-way, and administrative and service facilities.

The refining and marketing phases of the oil and gas operation would probably not take place on state land.

B. Action Requested of the State

1. General Lease Sales Procedures

Sales of oil and gas leases on state lands are normally held quarterly and are made by competitive oral bid. Any legally qualified person who wishes to have a tract of land offered for oil and gas leasing must submit a formal application along with a fee as prescribed by the Department of State Lands. In order to allow the necessary time for publishing the notice of the lease sale, applications are to be filed with DSL at least forty days before the regularly scheduled date of sale, whenever possible. As required by law, notice of the tracts to be offered for sale on the next sale date is published in the Montana Oil Journal.

Sales are made by the Commissioner of State Lands,³ subject to the approval of the State Land Board.⁴ This Board normally decides whether to accept lease sales at its regularly scheduled monthly meeting next following the sale date.

For a more complete description of the details of oil and gas leasing procedures on state lands, see Appendix A.

3. Chief administrative officer of the Montana Department of State Lands, the Commissioner of State Lands is appointed by and serves at the pleasure of the Governor.

4. The State Land Board, also called the State Board of Land Commissioners, is established by the Constitution of the State of Montana to consist of the Governor, Attorney General, Superintendent of Public Instruction, State Auditor, and Secretary of State.

2. Legal Provisions Governing Lease Sales

The provisions of law which govern the sale of oil and gas leases are found in Chapter 17, Title 81 of the Montana Statutes (R.C.M. 1947). In addition to the statutes, rules and regulations governing the issuance of oil and gas leases on state lands have been promulgated. A new set of such rules and regulations was adopted by the State Land Board on September 15, 1975, and will become effective on December 5, 1975 (see Appendix A).

3. Terms of State Leases

When the State Land Board issues a lease, the lessee is granted the right to explore, drill for, develop, and remove all oil and gas under the leased lands for a primary period of ten years (Section 81-1701, R.C.M. 1947). The rationale for not leasing these various phases separately (splitting the leases) is that, where development rights are not part of the original lease, bidders would not offer to pay as high a price. The lease's value would be less because bidders for an "exploration lease" would have no assurance that, if oil or gas were discovered, they would also receive the "development lease." Lease splitting would be, therefore, contradictory to the trust principle of securing the "...largest measure of legitimate and reasonable advantage to the state" (see Section IV. ALTERNATIVE ACTIONS 1. Legal Considerations).

Oil and gas leases on state land are subject to the following:

- (1) Terms described in the lease itself,
- (2) Rules and regulations of the Oil and Gas Conservation Division, Department of Natural Resources and Conservation (Chapter 1, Title 60, R.C.M. 1947), and
- (3) Such rules and regulations as the State Land Board prescribes (see Appendix A).

The lease provisions for oil and gas on state lands are similar to those required by the Bureau of Land Management on federal lands.⁵

5. See page 44 of the federal Draft EIS.

4. Continuance of Leases

The continuance of such leases is contingent upon the lessee's fulfilling all obligations set out in the lease. Briefly, those obligations include:

- (1) Complying with all rules and regulations of the Board of Oil and Gas Conservation relative to exploring and drilling for oil and gas,
- (2) Allowing inspections by DSL personnel and carrying out their instructions relative to the prevention of waste and spillage,
- (3) Using the highest degree of care and proper safeguards to prevent pollution of earth, air, or water by hydrocarbons or other pollutants,
- (4) Stockpiling any topsoil removed in the drilling operation, restoring the surface contours following the completion of drilling, and reseeding,
- (5) Drilling, upon completion of a commercially productive oil and gas well, such additional wells to the depth of the formation found commercially productive or to such a depth as may be necessary to economically test, develop, and operate the deposits discovered, and
- (6) Making payments to DSL in the form of lease rentals and, where applicable, delay drilling penalties and royalties.

III. EXISTING ENVIRONMENT

A. History

The lands constituting the 14,978-acre Coal Creek State Forest were granted to the state from 1892 to 1909 under the Enabling Act (see IV. ALTERNATIVE ACTIONS A. Legal Considerations). The discovery of coal near the mouth of Coal Creek in the 1880's was apparently one of the primary reasons the state selected this area for ownership. However, only a minor amount of coal was discovered and removed. Coal has not been commercially produced from this state land in the past forty years.

Large fires occurred on Coal Creek State Forest in 1910, 1919, 1922, and 1926. Approximately one half of the forest was burned in these fires; this area has since revegetated naturally.

In 1925, the state legislature formally designated the state-owned lands in the Coal Creek drainage as Coal Creek State Forest. However, forest development activities, in the form of roads and timber sales, were not initiated until the early 1950's, when a road was constructed up Coal Creek to provide access to U.S. Forest Service lands.

An extensive spruce bark beetle epidemic in the late 1950's and another in the late 1960's resulted in the two major timber sales that have occurred and the present forest road system. Timber management activities on Coal Creek State Forest have been limited almost entirely to salvage and sanitation types of cuts.⁶

B. Natural Environment

1. Climate

Coal Creek State Forest is primarily affected by Pacific maritime weather systems which characteristically result in large winter accumulations of snow leading to high stream flows in the spring. Precipitation occurs

6. Salvage and sanitation cuts can be broadly grouped as salvage cuttings. The general purpose of salvage cuttings is to remove trees that have been or are in danger of being killed or damaged by fungal or insect attack. Sanitation cuttings fall within this group, although their specific purpose is to prevent the spread of any pest to other trees.

throughout the year, although there are great variations by season and elevation. The higher elevations on the west side of the forest receive more precipitation than do the lower elevations along the eastern boundary.

Year-around weather stations have not been established in the State Forest; consequently, no precise annual meteorological data are available. However, a general conception of its precipitation regimes may be gained from the following data ⁷ which have been reported from Polebridge, located at 3,600 feet elevation and approximately 2.5 miles north of the State Forest.

Mean yearly precipitation at Polebridge is 23.6 inches. Mean monthly precipitation ranges from a low of 1.17 inches in July to a high of 2.91 inches during January. Snowfall is high, with the mean yearly figure being 122.4 inches. Over 90 percent of the snowfall and 50 percent of the precipitation occurs during the five-month period of November through March. The frost-free season at low elevations in the State Forest has been estimated at no longer than 30 to 40 days.

2. Hydrology

All water from Coal Creek State Forest flows into the North Fork of the Flathead River and ultimately into the Columbia River. However, with the exception of a recently-initiated study by the Montana Department of Fish and Game, flow figures are not available.

Coal Creek, Cyclone Creek, and Dead Horse Creek are the important perennial streams; a number of intermittent streams are also found in the area. Cyclone Lake, an extremely beautiful glacial lake, has approximately 160 acres of surface area.

3. Water Quality

Water quality of the North Fork and its tributaries on Coal Creek State Forest is generally good. However, relatively high sediment loads may be carried during the annual spring runoff.

7. U.S. Department of Agriculture, Forest Service, Flathead Wild and Scenic River Study (Washington, D.C.: Government Printing Office, 1973).

Sediment originating on the forest comes primarily from the glacial materials through which Cyclone and Coal Creeks flow. Some sediment is contributed from road surfaces, ditch runoff, and timber harvesting practices; however, the amount is believed to be small due to erosion control measures which accompany all road construction and timber harvesting activities.

The Montana Department of Fish and Game is presently monitoring water quality on both Coal Creek and Cyclone Creek. The parameters being studied are discharge, sediment, hardness, alkalinity, and pH.

4. Geology

Three formations of Precambrian-aged rock underlie that portion of the State Forest for which lease applications have been made. These are:

- (1) Roosville Formation—green-gray, red-brown, grayish-orange, and red-purple coarse-grained argillite. Some gray quartzite in lower part. Dolomitic stromatolites in the lower 1,000 feet.
- (2) Phillips Formation—grayish-red and red feldspathic sandstone, quartzite and argillite; some gray-pink and green-gray sandstone. Crossbedding, ripple marks, and mud-crack casts commonly found.
- (3) Kintla Formation—greenish-gray, grayish-red, and brown fine-grained argillite, sandstone, and quartzite. Dolomitic stromatolites interbedded with quartzite in the lower part.

No faults are mapped in the lease area. The types of rock present are usually quite competent, and the low dip angle of the surface bedrock, generally to the northeast at 19 degrees to 29 degrees, should reduce the possibility of bedrock failure.

5. Topography

The topography of Coal Creek State Forest has been strongly influenced by valley glacier modification of pre-existing bedrock features. Major ridges within the

forest such as Coal Ridge, Winona Ridge, and the unnamed ridge between Coal and Dead Horse Creeks have a strong east to southeast alignment. Consequently, southwest and northeast aspects are most characteristic of the forest.

Average side slopes on ridges within the forest range from 35% to 75%. Elevations vary from 3,480 feet along the North Fork road in Section 14, T34W, R21W, to 6,766 feet on Coal Ridge in Section 18, T34N, R21W.

Significant topographic and cultural features include Cyclone Lake, portions of the North Fork of the Flathead River, and two major streams, Cyclone Creek and Coal Creek. Two major forest access roads (the main North Fork Road and the Coal Creek Road) and several forest management roads pass through the forest (see Figure 1).

6. Soils

A detailed soils survey has not yet been made. A brief, initial examination indicates that the soils present consist of ash-influenced surface soils over medium-textured subsoils derived from glacial till.

During the soil formation process, this glacial till was apparently compacted by ice, creating differential permeability in the resulting soil. The compacted glacial till which is present over much of the forest is susceptible to slumping and also creates special problems in the re-establishment of vegetation due to the difficulty of root penetration and seedling survival.

7. Fire, Insects, and Disease

Past fires have played a significant role in the vegetational development of Coal Creek State Forest, as they have throughout the Northern Rocky Mountain region. Large wildfires are expected to reoccur periodically.

Due to the age and condition of the various forest stands, insect and disease problems are major considerations in planning forest management activities. The spruce bark beetle, Douglas-fir beetle, western budworm, larch

casebearer, and flathead woodborer have reduced growth and contributed significantly to tree mortality. The lodgepole pine mistletoe has also reduced the growth of stands in which it is found.

8. Vegetation

Coal Creek State Forest is predominantly forested with the exception of several south-facing slopes, small, grassy parks, and open, grassy ridges. The entire forest has been forest coverted, and acreages and timber volumes by condition classes have been determined. On the basis of this analysis, the most abundant tree species are Douglas-fir, western larch, Engelmann spruce, lodgepole pine, and sub-alpine fir; lesser amounts of western white pine, whitebark pine, and grand fir are present. Currently, the total merchantable sawtimber volume on the forest, for all species, is estimated at ninety-nine million board feet.

Only a very extensive reconnaissance of forest habitat types⁸ on Coal Creek State Forest is now available. The reconnaissance was made by the U.S. Forest Service in connection with its planning activities in the North Fork Planning Unit.⁹ Four habitat types were identified as occurring on the forest--Sub-alpine fir/queencup bead-lily, Sub-alpine fir/beargrass, Sub-alpine fir/menziesia, and Sub-alpine fir/woodrush.

9. Wildlife/Fisheries

Coal Creek State Forest provides habitat for many of the wildlife species native to the sub-alpine forests of the Northern Rockies. Mammals commonly encountered include elk, moose, white-tailed deer, mule deer, black bear, snowshoe hare, beaver, muskrat, and pine squirrel.

8. The habitat types were based on the system devised by Pfister, et al., U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station, Preliminary Forest Habitat Types of Western Montana, 1972.

9. U.S. Department of Agriculture, Forest Service, Flathead National Forest, "Vegetative Habitat Type 1 Descriptions of the North Fork Planning Unit," Multiple Use Plan North Fork Planning Unit, Report No. USDA-FS-FES (Adm) R-1-71-11 (Final Environmental Impact Statement), November 26, 1974.

Less commonly found are the mountain lion, lynx, fisher, martin, wolverine, and river otter. Although observations of the grizzly bear have not been recorded within the forest, there is no reason to believe that Coal Creek State Forest does not comprise at least a seasonal element of the grizzly bear habitat. Grizzly bear sightings have been made in drainages adjacent to Coal Creek.

Avian species include blue, spruce, and ruffed grouse, woodpeckers, and numerous perching birds. Raptors found on the forest include such uncommon species as the osprey, golden eagle, and bald eagle.

Coal Creek State Forest represents potential habitat for two species of wildlife recently classified as "endangered" by the U.S. Fish and Wildlife Service—the Northern Rocky Mountain wolf and the peregrine falcon. In addition, the grizzly bear was recently classified as "threatened." The effects of current forest management practices on Coal Creek State Forest on these three species are largely unknown, although no detrimental effects have been observed.

The Kalispell Office of the Montana Department of Fish and Game has provided the following information concerning wildlife on Coal Creek State Forest:

"There is no whitetailed deer, mule deer or elk normal winter range within the lease application area. Mule deer and a few elk winter on the Winona Ridge area just to the east of the land on which lease applications have been made. Moose are capable of traversing much of the terrain in the North Fork under average conditions of winter and we have been unable to pinpoint critical areas on which use can be expected each year. Black and grizzly bear occur throughout the North Fork. Three species of mountain grouse are found year-round in the area. Fisher, uncommon in the North Fork before the 1960's, have been trapped in drainages near Coal Creek and, since they are in an expanding population status, could be expected to occupy the lease application area. Many other species of small game and non-game can be found in the area." 10

10. Personal communication from Thomas R. Hay, Montana Department of Fish and Game, Kalispell, to James F. Gragg, Montana Department of Natural Resources and Conservation, Kalispell, August 28, 1975.

Cyclone Lake supports a good population of cutthroat trout. Both cutthroat and Dolly Varden trout are important game fish found in Cyclone and Coal Creeks, which are significant spawning streams for these species. Coal Creek is one of eight tributaries of the Flathead River that have been closed throughout the year to fishing. This closure is part of a plan by the Montana Department of Fish and Game to allow for adequate fish recruitment to Flathead Lake.

C. Social/Economic Environment 11

Coal Creek State Forest is used principally by local residents for a wide variety of activities including sightseeing, nature study, hiking, hunting, fishing, berry picking, picnicking, camping, pleasure driving, snowmobiling, and firewood cutting. Ice fishing on Cyclone Lake is a popular form of recreation. Developed campsites are not present on the forest.

Timber sales, thinning operations, timber salvage, and post and pole sales provide local employment, generate personal income, and furnish a source of raw materials for further processing by the local wood products industry. All monies received by the state from the sale of forest products are deposited in permanent funds, the interest from which is used for the support of public schools, state institutions, or other state entities to which the revenue has been dedicated. From forest product sales to date, in excess of \$638,000 has been provided to the various permanent funds involved.

In addition, two grazing leases, one cabin site lease, and an occasional special-purpose lease and permit have produced an undetermined, small amount of income from the forest. The monies received from such revenues are deposited in special interest and income funds and distributed as provided for by state law.

11. This material is intended to supplement the "Socio-Economic" discussion found on pages 25 and 26 of the federal Draft EIS.

IV. ALTERNATIVE ACTIONSA. Legal Considerations

The Congress of the United States by the Enabling Act (25 Stat. 676) approved February 22, 1889, granted Sections 16 and 36 in every township within Montana to the state for common school support. The Enabling Act and subsequent acts also granted acreage for other educational and state activities and further provided that all lands so granted could be disposed of only at public auction after proper advertising. In accordance with the Enabling Act, land comprising Coal Creek State Forest was obtained under the following grants:

- (1) Common Schools,
- (2) State Agricultural College,
- (3) School of Mines,
- (4) Deaf and Blind Asylum,
- (5) State Reform School,
- (6) State Normal School (Eastern Montana College and Western Montana College), and
- (7) Public Buildings.

As provided by law, state lands which were granted by the federal government are trust lands given for the support of schools and other public institutions. As such, these state lands are not public lands in the same sense that federal lands are. The beneficiaries of the trust are schools and institutions which belong to the people of Montana—not the people themselves.

The State Land Board, through the Montana Constitution, is given the authority to direct, control, lease, exchange, and sell school lands. (Land classified as State Forest, however, may not be sold.) Although decisions involving school lands (including the sale of oil and gas leases) are made by the Commissioner of State Lands, all such decisions are ultimately

subject to the approval of the Board. 12

State lands designated as State Forest are managed cooperatively by the Forestry Division of the Department of Natural Resources and Conservation and the State Land Board. Major actions concerning the management of State Forests, such as timber sales and easement and lease requests, are submitted with recommendations by the DNRC to the State Land Board for the latter's consent or denial. In the case of the proposed oil and gas leases on State Forest land, the Department of Natural Resources and Conservation will recommend to the State Land Board, through the Commissioner, whether or not to approve the lease sale.

The statutory principles which generally guide the actions of the State Land Board are:

- (1) The School Trust Doctrine (Section 81-103, R.C.M. 1947)"... the board shall administer this trust to secure the largest measure of legitimate and reasonable advantage to the state."
- (2) The Multiple-Use Concept (Section 81-103, R.C.M. 1947)

The Board shall manage these lands under the multiple-use concept defined as: " the management of all the various resources of the state lands so that they are utilized in that combination best meeting the needs of the people and the beneficiaries of the trust, making the most judicious use of the land for some or all of those resources ... without impairment of the productivity of the land, with consideration being given to the relative values of the various resources."

- (3) Resource Development (Section 81-2401, R.C.M. 1947)

12. Resolution No 273-6, minutes of the State Land Board meeting of February 20, 1973.

"It is in the best interest and to the greatest advantage of the State of Montana to seek the highest development of state-owned lands in order that they might be placed to their highest and best use and thereby derive greater revenue for the support of the common schools, the university system and other institutions benefitting therefrom and that in so doing, the economy of the local community...is benefited."

Coal Creek State Forest contains a substantial area of highly productive, commercial timberland. The sale of oil and gas leases could ultimately result in losses in forestry revenue from land clearing (for roads, pipelines, and well platforms), from possible long-term degradation of production due to hydrocarbon pollution of air, water, or soil, or from less-intensive forest land management caused by the splitting of forest land units. Consequently, the State Land Board must weigh the possible loss of state forestry revenue and other benefits against the possible rental and royalty income.

B. Management Considerations

The Kalispell Office of the Division of Forestry, Department of Natural Resources and Conservation, oversees the day-to-day management of Coal Creek State Forest. The overall management direction applied to this forest, as well as to all land classified as State Forest, is specified by state law, the State Land Board, and the Department of Natural Resources and Conservation. In this instance, management direction and consequent activity on the forest have been influenced by its proximity to Glacier National Park, the proposed wild and scenic river corridor along the North Fork of the Flathead, and the values of residents of the North Fork community and other Montanans.

A specific and formalized management plan for Coal Creek State Forest has not yet been prepared. Until such a plan is completed, the present management direction will continue to apply. Specific points follow.

- (1) Sites highly productive of forest products will be managed intensively in order to maximize income to state school funds with full consideration of all resource values under the multiple-use management concept.

- (2) Special management techniques will be applied on certain high quality sites to make resource development fully compatible with resource protection. Cyclone Lake and adjacent areas, state lands bordering the North Fork of the Flathead River, and Coal and Cyclone Creeks are examples of areas requiring special management in order to protect their aesthetic and fishery values, steep slopes, fragile soils, or critical wildlife habitat. A special need to evaluate and protect grizzly bear, Rocky Mountain wolf, and critical big game habitat is recognized.
- (3) All resource management activities planned on Coal Creek State Forest will be fully coordinated with owners of adjacent land and with state and federal agencies having immediate jurisdiction or expertise over the resources involved.
- (4) Forest management activities directed at wood production will not be conducted in areas which are inaccessible, inoperable, or marginal for wood production, or where other resource values have greater importance and will be adversely affected. This direction will be carried out until such time as improved management techniques permit such activity.
- (5) Coal Creek State Forest will remain open for general recreational use as long as existing resource values are not adversely affected. The DNRC will cooperate with the Montana Department of Fish and Game, the U.S. Forest Service, and all concerned parties in order to resolve specific problems as they occur.
- (6) Improved recreational developments are not planned on state lands within the Coal Creek and Cyclone Creek drainages.
- (7) Vehicle access to Cyclone Lake will not be provided. New roads or cutting units will not be developed within one-quarter mile of Cyclone Lake, although individual tree salvage will be allowed to within one-eighth mile of the lake.
- (8) Roads are not planned for the upper slopes lying south of Coal Creek, the south side of Coal Ridge, and at least the upper half of Winona Ridge.

- (9) Only minor expansion of the existing road system is planned, and no additional loop-type roads will be constructed. Road closures will be made as required for management or resource protection purposes.
- (10) Issuance of special use permits appears undesirable at this time. Each application will be examined individually.
- (11) The only large timber sale planned during the next five-year period will be the South Coal Creek sale, which will involve the harvest of about two to three million board feet of overmature timber. Timber harvesting will generally be limited to salvage and sanitation types of cuts. Opportunities to conduct thinning and other stand improvement activities will be taken as they become available.
- (12) Insect and disease problems will be evaluated on a case-by-case basis. Whenever possible, direct control, such as by trap trees,¹³ timber salvage, and other biological controls, will be used.
- (13) Forest fire protection will continue to be provided by the U.S. Forest Service through a cooperative agreement with the state.
- (14) No significant archeological or historical sites are known to exist within the boundaries of Coal Creek State Forest. If such sites are identified, suitable measures will be taken for their protection.
- (15) The suitability of lands for natural areas under the Natural Area Act of 1974 will be determined prior to any action which may preclude such classification. A marsh, adjoining mountain meadow, and woodland in Sections 34 and 35 have been tentatively identified as a potential natural area.

13. The "trap tree" method of insect control involves the use of freshly-cut materials which are more attractive to certain insects and, consequently, attacked first. After infestation, the trap tree or log is normally removed and utilized, and the brood is thereby destroyed.

C. Statement of Alternatives

The Department of State Lands may withdraw any tracts from a sale list up to, and including, the date of the sale. DSL also has the alternative of rejecting any and all bids. Finally, DSL has the alternative of including special provisions in the lease contract.

However, in that any sale, if made, is subject to the approval of the State Land Board, it is, finally, this Board's decision which constitutes the significant and major action which must be assessed under the Montana Environmental Policy Act. The Board would have two alternatives, to approve or disapprove the sale.

The basic issue considered in choosing between these alternatives is one of balancing possible environmental degradation against a reasonable return to the school trust.

1. Alternative One: Approval of Sale

a. Standard Leases

If leases with standard provisions are sold, lessee activity on the lease area would be subject to only those general environmental protection and hydrocarbon conservation measures provided in the oil and gas rules and regulations (see Appendix A). The potential revenues from leasing the fourteen tracts would be a function of the highest bid price received, the likelihood of finding oil and gas in the lease area, and, if gas or oil were found, the size of the reservoir.

The monetary return to the school trust would be higher than under a denial alternative but may be lower than under a deferment alternative. The probability of substantial environmental degradation would be greater than under either leases with special conditions or a denial alternative and probably would be greater than under a deferment alternative.

b. Leases with Special Conditions

The State Land Board may be asked to consider approval of leases sold with special provisions which prevent

surface occupancy in those areas considered to be biologically unique or too ecologically fragile to withstand exploration or development activity. If this is the alternative chosen by the Department of State Lands, the leases will be advertised for sale with the stipulation that special provisions will be included in the lease contract. Potential bidders will have the opportunity to examine such provisions prior to, and on the day of, the sale.

The monetary return to the school trust under State Land Board approval of leases sold with special conditions would be higher than under a denial alternative, probably lower than under a deferment alternative, and possibly equivalent to that under approval of standard leases. Since an oil and gas well is capable of tapping the hydrocarbons over a large area, such wells placed in "surface occupancy" zones may economically remove the oil and gas beneath areas where surface occupancy is not permitted. Directional drilling is another possible manner of removing the hydrocarbons beneath "no surface occupancy" zones.¹⁴

Potential environmental degradation would be less than that under approval of the sale of standard leases, greater than that under a denial alternative, and possibly less than that under a deferment alternative. Such degradation could be minimized by precluding exploration and possible development activities from areas that are environmentally sensitive (e.g., steep slopes, key wildlife habitat, floodplains, creek bottoms, and lakeshores). Resource protection could be further assured by requiring that, wherever possible, only existing roads be used in the exploration phases.

- (1) Management Zones. The Forestry Division of the Department of Natural Resources and Conservation has evaluated the resources of Coal Creek State Forest and designated various management zones in which specific and restrictive provisions should be applied to any resource development. To a large extent, these four zones are continuations of the U.S. Forest Service's recommendations for those adjoining sections involved in the federal oil and gas lease applications.

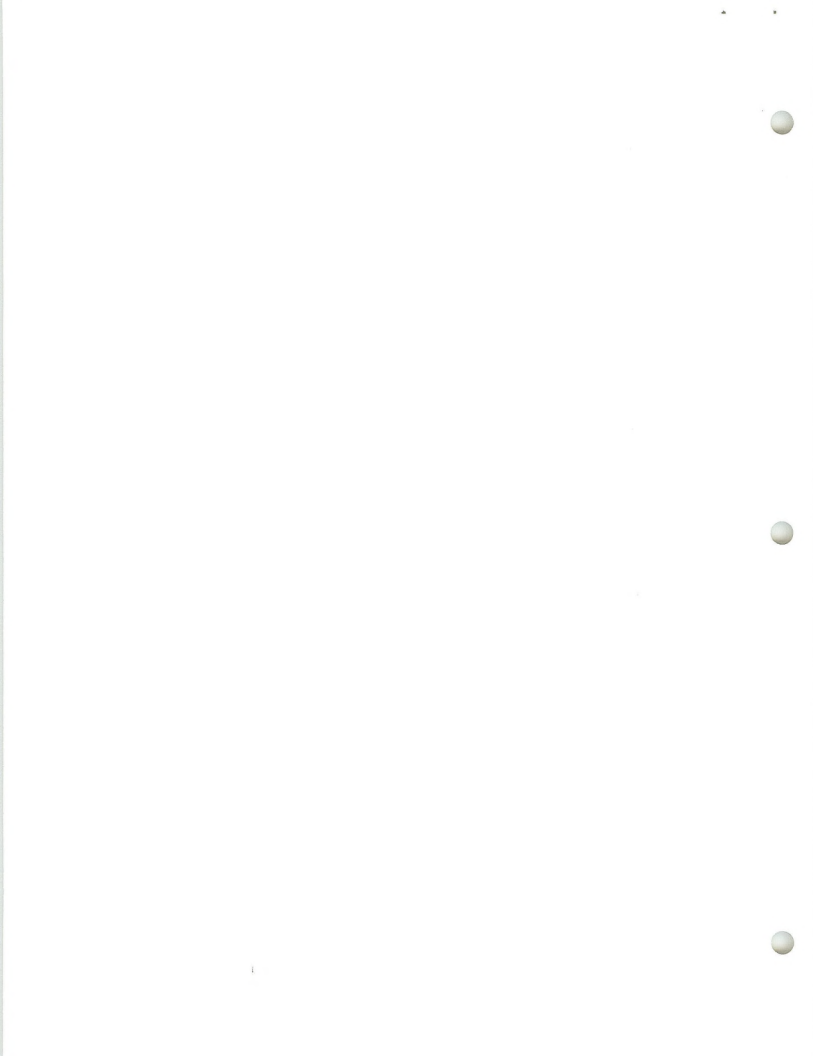
Each management zone is shown on Figure 1 and denoted by a number which corresponds with the following text. In order to facilitate an understanding of the restrictions proposed, each zone and the boundary of the lease area

14. "No surface occupancy" is defined as prohibiting the construction of drilling sites, roads, pipelines, structures, campsites, etc., or other actions requiring alteration of the vegetation or soils. Exceptions to this general statement will be cited below.

have also been superimposed upon an oblique aerial photograph which covers a portion of Coal Creek State Forest (see Figure 2). Further, as a means to show the management restrictions upon contiguous State Forest land, certain of the management zones extend beyond the proposed lease area boundary. Finally, and as noted earlier, the proposed state lease includes a tract of land with private surface ownership. Because the state has no authority over the management of the surface resources, this particular tract has been excluded from the various management zones.

2) Restrictions. Following are the restrictions proposed for each management zone shown on Figures 1 and 2.

- a. Zone 1 (Approximately 10 Acres). No surface occupancy or any other activities which may adversely affect the water quality and fishery of Cyclone Creek would be permitted.
- b. Zone 2 (Approximately 200 Acres). In order to protect the integrity and character of Cyclone Lake, no surface occupancy would be permitted within one-quarter mile of the lake shore. Existing spur roads within one-quarter mile of the lake that are not physically or administratively closed may be used, provided that no road improvement but only normal maintenance is provided.
- c. Zone 3 (Approximately 4,150 Acres). Surface occupancy would be permitted subject to the following lease provisions.
 - (1) At least forty-five calendar days prior to the commencement of both initial activity on the forest and the activities of each subsequent fiscal year, the lessee will provide the Supervisor, Northwest Area, Division of Forestry, DNRC, Kalispell (hereafter called Supervisor) with a detailed written description, hereafter called Annual Operating Plan, of all planned activities during that fiscal year. This Annual Operating Plan will include sufficient information and any maps necessary for the Supervisor to assess probable impacts upon surface and other resources during that year's activities.



The Supervisor's approval of such Annual Operating Plan will be conditioned upon reasonable requirements to prevent soil erosion, air and water pollution, and unnecessary damages to surface vegetation and other resources and to provide for reclamation of the land surfaces and other vegetation. No work will be done without approval of the Annual Operating Plan and compliance with all appropriate state laws.

- (2) Existing roads and trails may be used. The location and design standard of all roads, trails, and seismic survey lines to be constructed by the lessee must be approved in writing by the Supervisor prior to construction.
 - (3) Surface occupancy will not be permitted within one hundred (100) feet of perennial streams, intermittent streams with defined stream channels, springs, or water wells. In addition, surface occupancy will not be permitted within the floodplain of Coal Creek as delineated by the DNRC.
 - (4) Not all areas comprising critical grizzly bear or Rocky Mountain wolf habitat, archeological sites, or potential natural areas have been inventoried. If such areas are identified after this lease has been executed, the "no surface occupancy" provision will apply, and additional restrictions as may be necessary will be imposed to protect these areas.
 - (5) Should key winter range be identified within the State Forest, the season and character of operations will be modified to provide for management of such area(s). These areas will be delineated by the Supervisor at the time the Annual Operating Plan is presented for approval.
- d. Zone 4 (Approximately 3,240 Acres). No surface occupancy would be permitted because of steep slopes and fragile soils.

2. Alternative Two: Disapproval of Sale

a. Denial

If the State Land Board finds that the sale is not in the best interests of the State of Montana, it may deny the sale. The potential return to the school trust would remain at its present level, which is less than that under either approval alternative. However, under current management, the fourteen tracts return an intermittent but significant sum through timber sales and grazing and cabin site leases. Possible environmental degradation would be the least under this alternative. (The same effects would result if the Department of State Lands withdraws the tracts from the sale list or rejects all bids.)

b. Deferment

If the State Land Board does not approve the sale of either standard leases or leases with special conditions, the tracts could be again offered for sale at a later date. Deferment may allow current studies on "threatened" or "endangered" species habitat, water quality, natural area designation, and land use planning to be completed.

The return to the school trust fund would remain unchanged for the immediate future. However, the value of oil and gas reserves in the ground could appreciate significantly, thereby increasing the potential return to the school trust.

If the State Land Board defers selling the proposed leases upon Coal Creek State Forest but the Bureau of Land Management does lease adjoining federal tracts, the potential return to the school trust could be affected. If nearby federal tracts were found to overlay marketable quantities of oil and gas, the return to the school trust by deferred leasing could be enhanced. Bids may be higher in that the probability of discovering oil and gas under state land has become greater; eventual royalties may also be higher in that the price of oil and gas would likely have increased in the interim. Conversely, if no or non-marketable quantities of oil and gas were found under the federal leases, the return to the school trust by deferred leasing of the state tracts could be reduced or eliminated in that future bids may be lower or not offered.

Until the State Land Board chooses to approve a sale, no environmental impacts would result. At that time, depending upon technological advances and increased resource data, environmental degradation could be less than that associated with current approval of the sale of either standard leases or leases with special provisions, but would be more than that under a denial alternative.

V. ENVIRONMENTAL IMPACTS OF ALTERNATIVE ACTIONS¹⁵

A. Alternative One: Approval of Sale

A detailed and site specific analysis of all the impacts attendant to the granting of oil and gas leases is, at best, difficult. Those impacts associated with the initial seismic work comprise the only aspect of the operation that can be assessed with any certainty. However, since existing roads should be sufficient for this effort and it involves a non-destructive procedure, the impacts would be minimal.

The most significant environmental problems associated with granting the leases would result from exploration necessitating drilling and any subsequent development. Since the presence, size, and location of any oil and gas reserves are unknowns, any impact evaluations must be fully constrained by this lack of site specific information and limited to reasoned speculation.

The following environmental impacts are expected to result if the State Land Board approves a sale of either standard oil and gas exploration and development leases or leases with special conditions on Coal Creek State Forest. However, the inclusion of special conditions would reduce the total environmental impacts by prohibiting surface occupancy of critical areas and providing an opportunity, through Annual Operating Plans, to review, assess, and regulate activities in areas where surface occupancy would be permitted.

1. Natural Environment

a. Air and Water Quality

Air and water quality should be little affected during the exploration phase. If oil and gas are discovered, there will be some degradation, since required additions to the present transportation system will increase dust and sediment levels.

State laws providing standards for both air and water quality have been adopted and are in effect for all areas of Montana; any activity which would violate these standards must have written prior approval from the Montana Department of Health and Environmental Sciences (DHES). Any and all emissions must meet standards set by the Air Quality Bureau of DHES, and,

15. For a more comprehensive evaluation of the impacts associated with granting oil and gas leases in the Flathead area, the reader is referred to pages 44 through 66 of the federal Draft EIS. Many of the general findings are also applicable to the state situation.

similarly, a waste discharge permit must be obtained before any discharge of waste waters to state waters. Solid waste materials must be disposed of in such a way that runoff, leaching, or erosion will not result in a violation of state standards. Further, nonpoint activities, such as construction or road building, must be conducted in a manner that minimizes or eliminates pollution. Finally, plans for sewage disposal facilities must be reviewed and approved by DHES. Individual sewage facilities require a permit from the County Sanitarian.

Approval of a lease with special conditions would provide additional protection of air and water resources through such provisions as the following:

- (1) Written approval of the location and design standard of all roads, trails, and seismic survey lines to be constructed,
- (2) No surface occupancy within one hundred feet of perennial streams, intermittent streams with defined stream channels, springs, or water wells or within the Coal Creek floodplain,
- (3) No surface occupancy within the zones surrounding Cyclone Creek and Cyclone Lake, and
- (4) No surface occupancy in areas with steep slopes and fragile soils.

b. Geology, Soils, and Vegetation

If exploration is all that occurs, impacts to the surface should not be significant. However, if an exploitable discovery of oil and gas is made and development occurs, more extensive and longer-term alterations would result. Bedrock, soils, and vegetation would be disturbed in areas that are used for drill sites, access roads, and other activities that require surface modifications. These areas, for the most part, would be removed from timber, browse, or grass production until such sites are rehabilitated.

Approval of a lease with special conditions would provide some protection of bedrock, soils, and vegetation through such provisions as the following:

- (1) Written approval of the location and design standard of all roads, trails, and seismic survey lines to be constructed,

- (2) No surface occupancy in areas with steep slopes and fragile soils, and
- (3) No surface occupancy in inventoried sites with natural area potential.

c. Wildlife/Fisheries

Wildlife habitat would be modified by the oil and gas exploration and development processes. Although the exploration activities in themselves may not have a serious effect upon wildlife, the development activities could be detrimental.

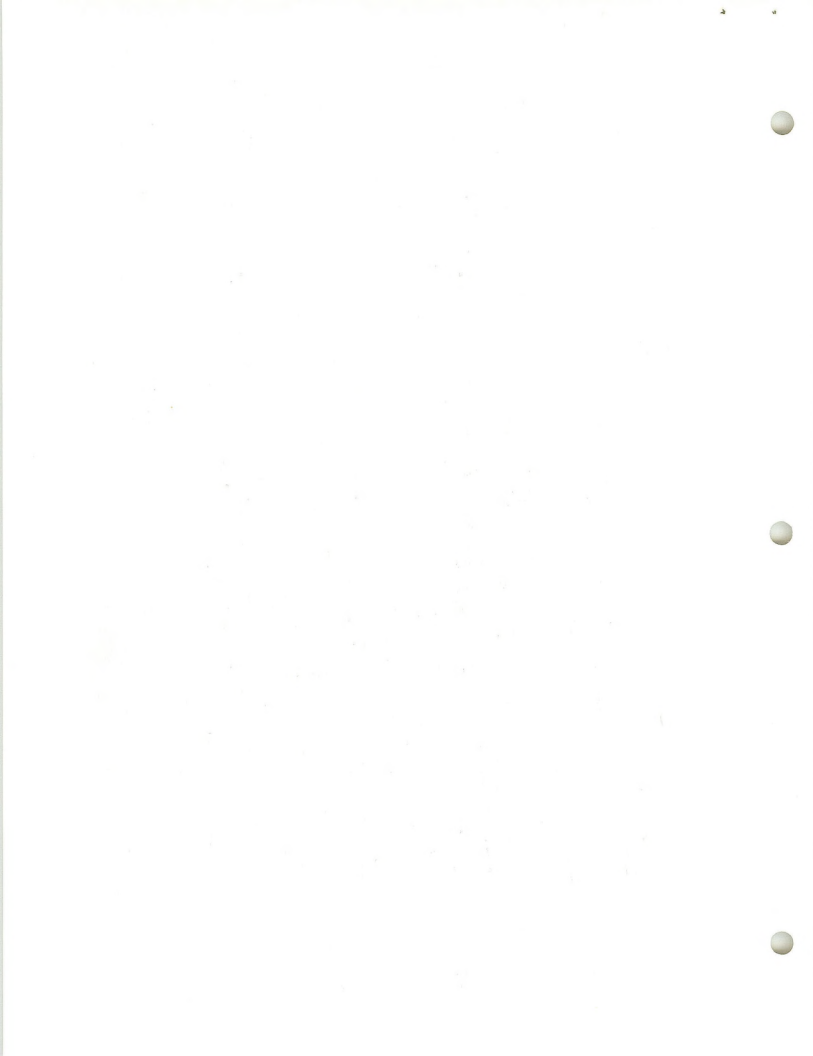
Exploration which necessitates drilling and any subsequent development may result in an expanded road system and an increase in human activity. Animals may be displaced from seasonal use areas, and activity patterns would be altered. Confrontations with grizzly bears would most likely occur, and poaching of all animals would increase. These activities, individually and collectively, would destroy individual animals and habitat and would not be beneficial to any wildlife species in the area.

Adverse impacts to the fisheries resource of the area would likely result if exploration which necessitates drilling and any subsequent development occurs. Such impacts could result from salt water or oil spills or from sedimentation created by poorly located and/or constructed roads, drill sites, or pipeline routes.

Existing water quality statutes would regulate and subsequently reduce the impact of those actions which may affect the wildlife and particularly the fisheries resources. Approval of a lease with special conditions would provide additional protection of the wildlife and fisheries resources through such provisions as the following:

- (1) No surface occupancy in inventoried critical habitat of "threatened" and "endangered" species,
- (2) Modification of the season and character of operations to protect inventoried key winter range,
- (3) Retention of the wildlife habitat values in the three "no surface occupancy" zones, and





- (4) No surface occupancy within one hundred feet of perennial streams, intermittent streams with defined stream channels, springs, or water wells or within the Coal Creek floodplain.

d. Noise

A certain amount of noise would result from the operation of trucks, drilling rigs, pumping stations, and construction and other equipment. These temporary impacts would occur during both exploration and development, although, depending upon the size of any oil or gas discovery, the impacts could be expected to be more pervasive during the development phase.

2. Social/Economic Environment

The social and economic ramifications of exploration and development in Coal Creek State Forest, along with the changes which are already occurring in the area, are expected to produce both positive and negative impacts. These impacts would probably be minor during exploration, but would become more significant if a development phase results. The magnitude of the impacts would, of course, depend on the size of the reserves and the extent of any development activities.

Direct benefits would accrue to the state and residents of Flathead County in the form of increased jobs, local tax base, and income to the various state trust funds involved. Increased human and economic activity would also create greater pressure on and demand for housing, recreational facilities, and public services. For example, based on current enrollment and recent growth trends, which indicate an increasing student population through 1985, projected school enrollments for the Columbia Falls district are at or over the capacity of existing and planned facilities.¹⁶

Initially, rather than live in the immediate North Fork vicinity, most of the increased population would probably choose to reside in or near Columbia Falls where services and amenities are more available. From all indications, however, the present lifestyles of the North Fork area residents would nonetheless be irreversibly altered should development take place.

16. Flathead County A.P.O. Staff, Flathead County Community Facilities Report, June 1974.

The concern of the North Fork residents for preserving their way of life is understandable and acknowledged. Any development there would bring changes in an area where electricity is available only through the use of individual generators and telephone service is limited. The addition of telephone and power lines from Columbia Falls and the anticipated increase in human activity and vehicular traffic would change the present primitive character of this area toward that of a residential/resort area.

The owner of private land within the proposed lease area may be subjected to some undesirable impacts, since that tract is adjacent to a State Forest area on which surface occupancy would be allowed. Should the owner not allow exploration or development activity on his land, directional drilling under the private land from state surface might make it possible to recover any oil or gas without disturbing the private surface or taking any of this land out of its present use. Nevertheless, increased human activity resulting from any nearby drilling operation would result in noise and dust and reduce the solitude of the site.

Hunting success for big game species may gradually decline with increased human pressures and the reduction of game populations. Fishing in these drainages could also deteriorate through increased pressures and possible degradation of water quality.

Any development or industrial activities will have an adverse effect on the natural qualities of the area, including scenery, open space, and solitude. The quality of such activities as camping, backpacking, and scenery viewing will be diminished for those who value solitude.

Certain segments of the resident and nonresident population interested in those types of recreation requiring less solitude or a more extensive road network, such as driving for pleasure, could be benefited. Additional access points would also be provided for hunting and, during the winter months, for people participating in snowshoeing, cross-country skiing, and snowmobiling.

Approval of a lease with special conditions would have no effect on the social and economic impacts outside state land, but some protection of the recreational and aesthetic attributes of Coal Creek State Forest would be afforded through such provisions as the following:

- (1) No surface occupancy within the zones surrounding Cyclone Creek and Cyclone Lake,
- (2) Modification of the season and character of operations to protect inventoried key winter range, and
- (3) No surface occupancy on approximately 3,240 acres of currently unroaded areas.

B. Alternative Two: Disapproval of Sale

1. Denial

Those beneficial and adverse impacts associated with any oil and gas exploration and development would not occur should the State Land Board deny the sale. The management direction in Coal Creek State Forest would continue under existing laws, policies, and management guidelines but would be revised as additional resource information and new techniques become available.

2. Deferment

During any period of deferment, the impacts resulting from oil and gas exploration and development would not, of course, occur. Should a lease sale be approved by the State Land Board at some future time, the previously mentioned impacts associated with oil and gas exploration and development would be expected. However, additional resource data and advanced technologies could, to some degree, assist in impact analysis and promote better and more efficient methods of resource protection.

VI. RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT
AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Similar to assessing the environmental impacts of granting the leases, evaluating their relationship to long-term productivity is constrained by uncertainty. If developable oil and gas reserves are not found in the area and preliminary exploration is the extent of any activity, the long-term implications of granting the leases are insignificant. If, however, developable reserves are found, the long-term implications assume greater meaning. Again, an absolute relationship is difficult to establish; further, it would vary by the size and location of any discovery.

A. Within the State Forest

If leases without special conditions were granted, the development of a sizable oil or gas reserve could reduce the long-term productivity of the area. Indiscriminate road and drilling locations could affect the productivity of the land for other consumptive and nonconsumptive uses such as timber, watershed, wildlife habitat, and wildland recreation. For example, constructing a road upon highly erosive soils could lead to continuing sediment production, with a long-term impact on the important fisheries resource of Coal Creek.

On the other hand, granting leases with special conditions would mitigate those undesirable actions which may jeopardize the long-term productivity of the State Forest. For example, limiting surface occupancy to areas which, at this time, are largely developed would substantially reduce the likelihood of further encroachment upon the roadless portion of the forest with its attendant resources and values. Requiring an approved Annual Operating Plan where surface occupancy would be permitted (Zone 3) would also limit activity and help protect the long-term productivity of the area.

B. Outside the State Forest

This is not to say, however, that granting a lease with special conditions would preclude all negative, long-term productivity implications. Such lease provisions would apply to the State Forest, but would have little bearing upon such possible off-site activity as pipelines, gas-processing facilities, or refineries. Obviously, many local, state, and federal laws would provide regulatory authority. Nevertheless, if a significant discovery were made upon state lands, the resulting off-site development could be significant.

A large, long-term oil and gas development and processing effort would tend to alter the rural character of the area to that of an industrialized area. The influx of necessary construction and operating personnel would create a local demand for more secondary employment. This fact may have certain beneficial economic ramifications. However, any population increase would also require greater social services, housing, and recreational facilities. Population increases in turn would lead to pressures for altering existing land uses. For example, depending on the extent of concomitant land subdividing, one could expect a reduction in the long-term productivity of lands for such alternative uses as farming, forestry, wildlife, or open space.

Oil and gas are valuable natural resources essential to the maintenance of our present way of life. Both national and statewide direction is toward increasing identification and development of these resources to meet recognized needs. Should oil and gas be discovered within the proposed lease area, their exploitation would, to some unquantifiable extent, alleviate increasing national shortages of these energy sources.

In Montana, the outlook for adequate natural gas supplies is precarious. Montana Dakota Utilities, servicing the eastern one-third of Montana, has enough to fulfill its current demands and meet somewhat greater demands. However, Montana Power Company, which services the western two-thirds of Montana, is dependent upon Canadian imports for 85% of its natural gas.

Canada has adopted a policy of retaining its gas resource for its own use and has given notice that Montana can expect substantially reduced exports and their discontinuation by 1993, if not sooner. In the event of total curtailment of Canadian exports, Montana's present in-state reserves would contribute to, but are not capable of, satisfying this state's demand.

Additional natural gas reserves may be discovered as a result of the proposed oil and gas leasing. Although there are no guarantees, it is possible that, if gas were found, it could be used in Montana. If this were the case, then to some extent Montana's natural gas situation could be eased.

However, the fact that oil and gas are exhaustible is also of great economic importance to the immediate area. It is conceivable that the area's economy, which is largely based on

renewable resources, could become more dependent upon non-renewable resources. Consequently, depletion of the oil and gas reserves could cause a sudden decrease in the economic well-being of the area. Resumption of the current pattern of dependency on renewable resources might or might not be possible at that time and would, in any case, mean a difficult readjustment. The significance of any such decline is again speculative in that it would depend upon such factors as the size and location of any off-site facilities, the nature of the dependent economy and social services, and the impacts sustained by renewable resources.

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The exploration and development of any oil and gas reserves in Coal Creek State Forest would both directly and indirectly commit substantial quantities of resources. Certain materials used in tapping any reserve could be salvaged and recycled; others (e.g., certain portions of pipelines) would be irretrievably committed.

In that specific data are unavailable, this topic is treated qualitatively rather than quantitatively. Obviously, however, as the size of any discovery increases, the extent of the irreversible commitment of resources would increase.

A. Energy

Although the purpose of any exploration and development program is to obtain various energy sources, other energy supplies must be irreversibly committed in discovering, processing, and transporting the product. The products used in developing a reserve require energy to manufacture, transport to the site, and eventually remove from the site. The amount of energy consumed in transporting materials depends upon the method of conveyance and the distance covered. Further, energy is necessary on-site to handle and assemble the various components.

B. Non-Renewable Resources

Depending upon the type and level of development, various non-renewable resources would be irreversibly and irretrievably committed. Among these are fossil fuels, concrete, wire, cable, aluminum, and steel.

In that crude oil and natural gas are non-renewable resources, their discovery and subsequent depletion would constitute an irretrievable commitment. This fact is significant in that domestic production of these two basic fuels has been declining since 1970. The exploitation of each reserve means that future oil and gas consumers must utilize reserves for energy and chemical feedstocks which are probably more expensive, less accessible, and more environmentally risky.

As oil and gas eventually become economically or physically unavailable, it will be necessary to rely on more sophisticated, and perhaps undeveloped, technology to satisfy our energy and chemical needs.

C. Renewable Resources

Commitments of the renewable resources of the State Forest itself would be largely limited if any lease sold and approved contains the previously noted special conditions. Nevertheless, there would be a certain irretrievable loss of biological productivity. For example, land committed to drill sites or access roads would not be capable of producing timber products and maintaining associated forest values while these activities are proceeding. Therefore, fiber production, wild-life habitat, etc., which are not realized or utilized because of exploration or development efforts are irretrievable resource commitments.

Timber is a renewable resource, and many land-use changes, such as roads and drill sites, are reversible. However, if reclamation of abandoned drill sites or access roads is not complete, it is possible for the long-term productive potential of the land to be reduced. The amount of any reduction must similarly be considered an irretrievable resource commitment.

VIII. AGENCIES, GROUPS, AND INDIVIDUALS FROM WHOM COMMENTS HAVE BEEN REQUESTED

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Flathead County Commissioners
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 University of Montana
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Appendix A

Rules and Regulations Governing The Issuance

of

Oil and Gas Leases on State Lands

STATE OF MONTANA
RULES AND REGULATIONS
Governing the Issuance of
OIL AND GAS LEASES
on
LANDS UNDER JURISDICTION
of
BOARD OF LAND COMMISSIONERS
Effective December 5, 1975

BOARD MEMBERS

Governor
Supt. of Public Instruction
Secretary of State
Attorney General
Auditor

DEPARTMENT OF STATE LANDS
1625 Eleventh Avenue Helena, Montana
Mailing Address: Capitol Station
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RULES AND REGULATIONS
GOVERNING THE ISSUANCE OF
OIL AND GAS LEASES ON STATE LANDS
OF THE STATE OF MONTANA

1. General Provisions

The Board of Land Commissioners is established by the constitution of the State of Montana (Article X, Section 4) to consist of the governor, superintendent of public instruction, auditor, secretary of state and attorney general. It has the authority to direct, control, lease, exchange and sell school lands which have been or may be granted for the support and benefit of the various state educational institutions, under such regulations and restrictions as may be provided by law. Pursuant to the provisions of Section 82A-1101, Revised Codes of Montana 1947, the Board of Land Commissioners is designated the department head of the Department of State Lands, as established by the legislature of the State of Montana. The Department of State Lands has responsibility for the administration of laws relating to state lands.

In the exercise of its powers, the guiding rule and principle of the Board of Land Commissioners is that the state lands are held in trust for the support of education, and for the attainment of other worthy objects helpful to the well being of the people of this state; and that it is the duty of the Board to so administer this trust as to secure the largest measure of legitimate and reasonable advantage to the state.

2. Definitions

When used herein, unless a different meaning clearly appears from the context:

"State" means the state of Montana;

"Board" means the Board of Land Commissioners of the State of Montana;

"Commissioner" means Commissioner of State

Lands, chief administrative officer of the Department of State Lands;

"State Lands" means all lands the leasing of which for oil and gas is under the jurisdiction of the Board;

"Person" means any individual, person, firm, association or corporation or other legal entity;

"Lessee" means the person in whose name an oil and gas lease appears of record in the offices of the Department, whether such person be the original lessee or a subsequent assignee. The term "lessee" also includes, where the context of the rule may indicate, any person who is the apparent successful bidder for an oil and gas lease but with whom a formal oil and gas lease agreement has not been completed and finalized;

"Oil and Gas" means all hydrocarbons and other substances and elements which are present in the earth in a gaseous or liquid form and produced therefrom. It shall not include coal, lignite, oil shale or similar solid hydrocarbons. Nor shall it include minerals, waters, steam or any geothermal resource produced pursuant to a geothermal resources lease issued by the state;

"Standard Lease Form" means the lease then currently in use and approved by the Board;

"Qualified Applicant" means any person who may become a qualified lessee as set forth under rule 5 hereof;

"Department" means Department of State Lands as provided in Section 82A-1101, R.C.M. 1947.

3. Administrative Details and Information

The offices and records of the Department are maintained at 1625 East Eleventh Avenue, Helena, Montana, under the direction and administration of the Commissioner. Requests for information, application for leases and other matters should be addressed to the Department. Payment of all moneys required or permitted un-

der these rules or pursuant to the provisions of any oil and gas lease shall be made to the Department of State Lands. All checks, drafts and money orders shall be made payable to "Department of State Lands, Montana." Sight drafts will not be accepted.

4. Lands Available for Leasing

State lands available for leasing under these rules include any state lands in which the oil and gas rights are not reserved by the United States or other grantor or predecessor in title. Such state lands include those which have been sold but in which oil and gas rights have been reserved, in whole or in part, by the State of Montana, but in such cases where the lands are under lease for grazing, agriculture or similar purposes, care will be taken in issuing the oil and gas lease to protect the rights of the purchaser or surface lessee.

Such lands include all lands owned by the State under navigable lakes or streams.

Unsurveyed lands, including those under lakes and streams, are available for leasing; provided, that any applicant for a lease on such lands shall supply the Department with a legal and sufficient description thereof, by courses and distances (metes and bounds). The Department shall assume no liability or responsibility for the correctness, completeness and validity of such description.

No lease may embrace more than six hundred forty (640) acres, except that any section surveyed by the United States which contains more than six hundred forty (640) acres may be included under one lease.

The land shall be leased in as compact bodies as the form and areas of the tract held by the State and offered for lease will permit. No lease may embrace noncontiguous subdivisions of lands unless such subdivisions are within an area comprising not more than one (1) square mile.

Any person qualified to hold an oil and

gas lease on State lands may acquire, receive and hold more than one lease.

5. Who May Lease for Oil and Gas --Qualified Lessees

Any person, association, partnership, corporation, domestic or foreign, or municipality qualified under the constitution and the laws of the State of Montana may lease state lands for oil and gas purposes; however, all corporations not incorporated in Montana must obtain a certificate of authority to transact business in this State from the Secretary of State. Also, no officer or employee of any agency of the executive Department of state government who is required to inspect or examine oil or gas wells or otherwise to gather field information in regard to prospecting for oil and gas or the production thereof, may take or hold such lease, nor shall any such person become interested in any manner in any oil or gas lease on state lands.

6. Procedures for Issue of Lease

a. A sale of oil and gas leases on state lands normally will be held once in each quarter, on the first or second Tuesday of March, June and December, and on a day in September that will not conflict with the Labor Day holiday. It will be in the Department's discretion to waive a sale on any of these dates if insufficient applications have been received or to postpone if circumstances warrant. In such event a notice of "No Sale" will be published in the Montana Oil Journal or in a publication of general circulation in Montana as provided for in subsection b of this rule. Sale of each lease will be by competitive, oral bidding, and sale will be made and a lease executed to the qualified bidder who makes the highest bid. In the absence of any bid at such sale, on a particular tract, a lease will be issued to the person who first made application - therefor in

accordance with these rules. The Department reserves the right to reject any and all bids on any tract offered for lease.

b. Any person who desires that any tract of state lands be offered for oil and gas leasing at sale as above described shall make application for oil and gas leasing on the form prescribed by the Department and then in current use. Blank forms for such applications may be secured from the Department at no cost. Such application shall be, in form, an application for the issuance of an oil and gas lease to the applicant, shall contain, among other things, an adequate and sufficient description of the land sought to be leased, and shall be deemed and considered for all purposes an offer to lease the lands described therein and a bid therefor in the amount of the minimum required first year's rental. There shall be submitted with the application payment of a ten dollar (\$10.00) application fee, and this shall be the only payment required to be submitted with the application; however, each application shall constitute an undertaking to pay, within ten (10) days after the lease sale, the required first year's rental for the lease if at the lease sale the first applicant is the successful bidder therefor. If at the lease sale the successful bidder is a person other than the first applicant, the person shall submit within ten (10) days after the sale the required first year's rental.

In order to permit the necessary time for notice of sale as herein provided, applications should be filed with the Department at least forty (40) days prior to the date fixed for sale, whenever possible. Any application made may be withdrawn by the applicant if request for such withdrawal is received by the Department prior to the time when the second notice of the sale, as hereafter provided, is sent to the publisher, but the ten dollar application fee will not be refunded.

Where more than one application is filed on any one tract, the department shall notify

each person submitting an application subsequent to receipt of the first qualified application, that there is a prior application for that tract and shall return the application fee. Where the first applicant for a tract withdraws his application as provided above, and subsequent applications for that tract have been received, the tract shall be offered for lease regardless of the withdrawal. In such case the opening bid must be not less than the minimum rental required by Rule 9 of these rules. If no bids are made the tract will not be leased.

Notice of each sale shall be given by publications in the Montana Oil Journal, published in Billings, Montana, or in a publication of general circulation in Montana. There shall be at least two publications of notice, the first of which shall be within fifteen (15) days after the previous oil and gas lease sale, and need contain only the date and place of sale, as its purpose is to allow applicants to submit their applications prior to the forty (40) day deadline provided above. Other publications, the first of which shall be not more than forty (40) days prior to the date of the oil and gas lease sale, shall state the exact time and place of the forthcoming sale, shall state that all sales will be by oral competitive bidding; and shall describe each tract separately that will be offered for lease.

The Department will maintain a mailing list of prospective oil and gas lessees who request, in writing, that their names be placed on the list. At least two weeks before each sale, the Department will mail to each addressee a copy of the notice of sale.

7. Term of Lease, Extension by Drilling Operations at End of Tenth Year

The oil and gas lease which shall be issued to the successful bidder therefor shall be granted for a primary term or period of ten (10) years, and as long thereafter as oil or gas in paying quantities is produced, on condition

that all drilling, rental and other obligations are fully kept and performed by the lessee.

If oil or gas is not being produced from the leased premises at the expiration of the primary term of the lease but the owner of the lease or his designee is then engaged in drilling on the premises for oil or gas, then the lease continues in force so long as such drilling operations are being diligently prosecuted. If oil or gas is recovered from any such well drilled or being drilled at or after the expiration of the primary term of the lease, the lease continues in force so long as oil or gas in paying quantities is produced from the leased premises.

The Board reserves the right to decide whether such drilling operations, which may continue a lease beyond the primary term, are being diligently prosecuted.

8. Form and Provisions of Lease

The oil and gas lease which will be issued to the successful bidder therefor shall be upon the form currently in use and approved by the Board. Such form, shall contain all terms, provisions, and conditions as may be reasonable and proper which are not inconsistent with the Enabling Act, the Constitution and the laws of the State and these rules.

9. Rentals

An annual money rental shall be paid to the State for each oil and gas lease at the rate of one dollar and fifty cents (\$1.50) for each acre of land leased; however, such rental shall in no case be less than one hundred dollars (\$100.00) per annum. Rental for the first year of the lease shall include any sums in excess of one dollar and fifty cents (\$1.50) per acre offered and accepted for such first year's rental. The first year's rental shall be paid before the issuance of the lease. Rental for each subsequent year of the lease shall be due

and payable before the beginning of each subsequent year, and upon failure to make such payments, the lease terminates.

The annual money rental is not in lieu of drilling operations, but continues throughout the life of the lease.

The annual money rental is in addition to any non-drilling penalty and any royalty payment. No credit against royalty payment is allowed by reason of the annual money rental payment.

No partial rental payment will be accepted, and the entire rental shall be considered unpaid until the full rental payment has been received.

10. Delay Drilling Penalties

The lessee shall commence the drilling of a well for oil or gas upon the leased premises within five (5) years of the date of approval of the lease or pay in advance a delay drilling penalty as follows: for the sixth year of the lease one dollar and twenty-five cents (\$1.25) per acre covered by the lease, and for the remainder of the primary term of the lease an amount per acre per year as the Board may, in its discretion, determine. The delay drilling penalty for the seventh and succeeding years of the primary term of the lease shall continue at the rate of \$1.25 per acre per year, unless the Board notifies the lessee not less than sixty (60) days before the commencement of the next year of the lease that payment at a different rate is required or permitted; provided that if the lessee shall apply for a hearing thereon within ten (10) days after receipt of notice, the determination of a different delay drilling penalty rate shall become final only after such hearing has been held, and the rate determined by the Board has been affirmed.

Upon failure of the lessee to either commence the drilling of a well for oil and gas upon the leased premises or to pay the required delay drilling penalty, the Board shall have

full power and authority to declare termination of the lease as of the end of the annual period of the lease in which the failure to so commence drilling or to so pay occurs. Any such termination of the lease shall be after notice to the lessee of the Board's proposed action, and after hearing thereon if the lessee so requests in writing.

If the first well drilled on the leased premises is a dry hole, and if a second well is not commenced on the land covered by the lease before the next anniversary of the lease following the completion of the well, the lease may be terminated by the Board, unless the lessee, on or before such anniversary date, resumes the payments of penalties in the amounts provided in this section. Upon the resumption of the payment of such delay drilling penalties and their continued payment, the lease continues in force during the primary term as though there had been no interruption in the delay drilling payments.

In case of any commencement of drilling in lieu of payment of a delay drilling penalty as above provided, the drilling of such well shall be prosecuted with due diligence and dispatch to such depth as is necessary to make a reasonable test for oil or gas. Failure of the lessee to do so shall subject the lease to termination by the Board as though the lessee had neither commenced the drilling of the well nor paid the required delay drilling penalty. The lessee shall, within five (5) days of spudding in, notify the Department of the commencement of drilling of any well.

11. Royalties

The lessee shall pay in cash or deliver in kind to the lessor at its option, on all oil and gas produced and saved from the leased premises and not used for light, fuel and operation purposes on the leased premises, a royalty which shall be at the following rates unless, in regard to a particular lease, the Department

advertises in its lease sale notices that the royalty will be at a higher rate:

1. On gas, at the rate of 12 1/2%;
2. On oil: on that portion of the average production of oil or casing-head gasoline for each producing well not exceeding 3,000 barrels for the calendar month, 12 1/2%; on that portion of the average production of oil or casing-head gasoline for each producing well exceeding 3,000 barrels but not exceeding 6,000 barrels for the calendar month, 17 1/2%; on that portion of the average production of oil or casing-head gasoline for each producing well exceeding 6,000 barrels for the calendar month, 25%.

The royalty on gas, including casing-head gas and all gaseous substances, while the same is not sold or used off the premises shall be at the rate of four hundred dollars (\$400) per well each year or the amount of the annual rental provided in the lease, in lieu of the per well rate, whichever is the greater, payable on or before the annual anniversary date of the lease, and as long as the leased lands contain a well capable of such production and such payment is made the lease shall be considered a producing lease under the lease terms.

The lessee shall pay royalties reserved to the State, in cash,

(a) on the reserved fraction of oil, the posted field price, or in lieu thereof, if no field price is posted, the fair market value in the field where produced on the day it is run into the pipeline or storage tanks, and

(b) on the reserved fraction of gas, the posted field price, or in lieu thereof, if no field price is posted, the fair market value at the well. In addition, the lessee shall pay to the State on the reserved fraction any bonus actually paid or agreed to be paid to the lessee for such oil or gas.

All royalties, whether in money or in kind, shall be delivered to the state free of cost and deductions.

12. Assignments and Transfers

a. The assignment of any lease, either in whole or as to subdivisions of land embracing not less than forty (40) acres covered thereby, made to an assignee qualified as provided under the law and these regulations is permitted. Such assignment is not, however, binding upon the State until filed with the Department, accompanied by the required fees, together with proof of qualifications of the assignee as a lessee, and until the assignment is approved by the Department. For the purposes of this rule, any lot, according to the governmental survey, shall be deemed to be a legal subdivision of land embracing not less than forty (40) acres. The approval of any assignment so filed and supported may not be withheld in any case where the rights or interests of the State in the premises assigned will not, in the judgment of the Department, be prejudiced thereby. Until such an assignment is approved, the lessee of record shall continue fully liable and responsible for all of the requirements and obligations of the lease.

In the case of a partial assignment, i.e. assignment of a full interest in only a portion of the leased premises, a new lease is issued for the assigned acreage, with the same expiration date as the original lease. A new ledger sheet is written and the original lease is adjusted accordingly. The original lessee and the assignee assume full liability for their respective leases.

b. The assignment of any oil and gas lease, either in whole or in part, to more than one assignee will be permitted if the proposed assignment is otherwise in compliance with the foregoing requirements; however, any such assignment will not be approved until one of the assignees is designated to act as agent for the purpose of receiving any and all notices from the Department given in connection with the lease and meeting all requirements and obligations under the lease.

c. Assignment of undivided, fractional interests in any lease, either as to the whole of the leased premises, or as to any portion thereof, is arranged by having the lessee assign title to the acreage in question to himself and the assignee. The assignment may show the respective shares of interest but the transaction is approved as a transfer of title only and without recognition of the respective interests.

d. All other assignments of oil and gas leases or interests therein are subject to approval by the Department, and are binding upon the State in the discretion of the Department.

e. Assignments involving overriding royalties or containing certain reservations by the assignee are approved as transfers of title only and without recognition of such overriding royalties or special terms and conditions.

f. Forms of Assignment of Transfer of Interests.

An assignment or transfer on the form currently approved by the Board will be acceptable.

Evidence of transfers by operation of law should be in the form of a certified copy of the appropriate court order or decree or similar document, such as letters of administration to executor or administrator, decree of distribution, executor's deed or sheriff's deed.

g. Transfer by Operation of law to Unqualified lessees: Any transfer, by operation of law, to an unqualified lessee will be recognized by the Department for a period of time in no event longer than one year, and only for the purpose of the further transfer of the interest to a qualified lessee.

h. The Department shall notify the parties to any assignment or other transfer submitted for approval of the approval or non-approval thereof.

i. As to development and production, the lease is regarded as indivisible so that drilling or securing production on any part of the severally assigned tract will inure to the benefit of all segregated parts of the original lease.

13. Surrender of Lease

a. The lessee under any oil and gas lease granted by the State may at the termination of any rental year, by giving to the Department thirty (30) days previous notice in writing, surrender and relinquish to the State any legal subdivision of the lands leased, and be discharged from any obligation not yet accrued as to the lands so surrendered and relinquished, without prejudice to the continuance of the lease as to the lands not surrendered or relinquished.

b. Although no particular form of surrender is required, such surrender must be in writing, must sufficiently identify the lease sought to be surrendered, and must specifically describe the lands to be surrendered, whether all of the lease premises or a portion only.

c. Such written instrument of surrender and relinquishment must be signed by the owner of the lease as shown by the records of the Department. If more than one person owns the working interest in a lease, either all such owners must join in a joint surrender of the lease or each must submit a separate, written surrender.

d. If operations have been conducted on lands which lessee desires to surrender, the lessee shall also submit with his written instrument of surrender evidence of the proper plugging and abandonment of any hole drilled on the lands, together with evidence that he has restored the premises in accordance with Rule 17(d).

e. If timely notice is given by the lessee of an intent to surrender lands, but the instrument of surrender is inadequate under the rules herein set forth, or if any additional required information is not timely supplied by the lessee, such informal notice of intent to surrender shall be effective to relieve the lessee of any obligation to pay further rental on the acreage to be surrendered, provided that

an instrument of surrender and any additional required information is supplied to the Department within sixty (60) days after the surrender date as intended and sought by the lessee.

14. Forfeiture, Cancellation and Termination of Leases

a. General. Every oil and gas lease granted by the State is subject to forfeiture and cancellation thereof upon failure of the lessee to fully discharge the obligations provided therein, after written notice from the Department and reasonable time allowed to the lessee for performance of any undertaking or obligation specified in such notice concerning which the lessee is in default. Before any lease is declared forfeited or cancelled, the Department shall issue written notice to the lessee of the proposed forfeiture or cancellation, and if, within ten (10) days after receipt of the notice, the lessee makes written application for a hearing on the matter, the lessee shall be granted a hearing before the Department and no forfeiture or cancellation shall become effective until after such hearing and until the Department confirms the original decision and intent to forfeit or cancel the lease, based upon the hearing. Following such hearing, notice of the decision shall be given to the lessee. Such decision may be for immediate cancellation of the lease without further opportunity of the lessee to correct any default, but the Department may also grant the lessee a further extension of time within which to perform certain specified required acts in order to continue the lease, failing which the lease will automatically terminate without further notice or hearing.

b. (1) Promptly upon receipt of such notice that a lease is to be cancelled or forfeited, if the lessee does not, within the permitted ten (10) days period apply for hearing on such notice, and (2) promptly after receipt of the final decision to cancel or forfeit the

lease, following hearing on the matter, if the lessee does not appeal, the lessee shall furnish the Department with written instrument of surrender of the lease as required under the provisions of Rule 13 above.

15. Pooling Agreements and Unit Agreements

a. The Board is authorized to enter into pooling agreements and unit agreements for the purpose of pooling and unitizing State lands held under oil and gas leases with other lands. In connection with such agreements the Board is authorized to modify any State lease with respect to delay rentals, delay drilling penalties, and royalties in accordance with such pooling agreements and such unit plans of operation; however, no such agreement may change the percentage of royalties to be paid to the State from the percentage as fixed in the lease computed on the production of oil and gas allocated to the State lands within such pooled or unitized area.

Oil and gas produced from any part of a unit in which state lands are included by virtue of a pooling or unit agreement, are considered to be produced from the state lands therein for purposes of these rules and regulations.

b. No particular form of pooling agreement or unit agreement is prescribed or required by the Board. However, if the unit agreement is in form as prescribed by the United States Geological Survey for unitized operations affecting Federal lands, the commitment of State lands to such unit agreement will normally be effected by means of the execution by the Board of an Approval and Certification on the form adopted by the Board on June 12, 1968. In all cases it is recommended, although not required, that the proposed form of pooling agreement or unit agreement be submitted to the Board for preliminary approval prior to execution by the other participants.

Operating Agreements

any lessee may enter into agreements with another person for drilling and other operations for oil and gas on State lands under his lease or leases. However, no such operating agreements are in any way binding upon the State until filed with and approved by the Department.

17. Operations on State Leases

a. The lessee shall conduct all operations subject to such inspections as the Department shall decide to make, and shall carry out at the lessee's expense all reasonable orders and requirements of the Department relative to the prevention of waste and preservation of property. On the failure of the lessee to do so, the Department shall have the right, together with other recourse herein provided, to enter on the property to repair damages or prevent waste at the lessee's expense.

b. In all operations on lands leased pursuant to these rules and regulations, the lessee shall use the highest degree of care and all proper safeguards to prevent pollution of earth, air or water by hydrocarbons or other pollutants, excepting that pollution which is allowed, if any, by these rules and regulations and the rules and regulations relating to oil and gas published by the Oil and Gas Conservation Division of the Department of Natural Resources and Conservation. In the event of pollution, directly or indirectly caused by lessee's operations on lands leased pursuant to these rules, lessee shall use all means at its disposal to recapture escaped hydrocarbons and other pollutants and shall be responsible for all damage to public and private properties, including bodies of water of any sort, whether above or below the surface of the earth.

c. To minimize conflicts with the owner or lessee of the surface of the land leased, lessee hereunder shall:

(1) provide the surface owner or lessee with a plan for location of all facilities;

(2) consult with the surface owner or lessee regarding a reasonable location of access roads. The access roads must be located along section lines and existing roads to the fullest extent possible and they must disturb as little acreage as possible unless the surface owner agrees otherwise. In locating the roads, priority shall be given to minimizing interference with the surface owner's or lessee's operations.

The lessee shall make just payment to the surface owner for all damage done by reason of his entry upon, and use and occupancy of, the surface of the land.

d. When any oil or gas well drilling operation is commenced on land leased pursuant to these rules, any topsoil on affected lands shall be removed and stockpiled on the site. The lessee shall take all reasonable, necessary steps to insure the preservation of the stockpiled topsoil including a temporary vegetation cover to prevent erosion. At the completion of oil or gas recovery operations, and upon the final abandonment and completion of the plugging of any well, the lessee shall, unless the owner of the surface requests otherwise and executes a release to that effect, restore the surface of the location to its original contours as far as reasonably possible, redistribute the topsoil, and reseed the land with native grasses and/or native plants as prescribed by the Department.

e. Each lessee, in conducting his explorations and mining or drilling operations shall use all reasonable precautions to prevent waste of oil or gas developed in the lands and to prevent the entrance of water through wells drilled by him to the oil and gas sands or oil or gas bearing strata to the destruction or injury of the oil or gas deposits.

f. On or before the last day of each month every holder of a producing oil or gas lease shall make a report to the Department for

that is closed at calendar month, on a form the Department prescribes. The report shall show the amount of oil or gas produced and saved during the preceding month, the amount of oil and gas sold, the price obtained, the total amount of all sales, and additional information as required on the form. The reports shall be signed by the lessee or some responsible person having knowledge of the facts reported, and shall be accompanied by payment of the amount due the State as royalty for the month covered by the report, unless the State's royalty is being or has been paid direct by the purchaser of the production.

When the lessee is required by Rule 230 of the Oil and Gas Conservation Board to file a completion report (form 4) with that Board, he shall also file one copy of the completion report with the Department of State Lands.

g. A lessee is required, upon completing a commercially productive oil or gas well upon the lease premises, to proceed with reasonable diligence to drill such additional wells to the depth of the formation found commercially productive, or to such depth as may be necessary to economically test, develop and operate the deposits discovered. As to lands found valuable for oil production, no lessee will be required to drill to completion more than one well under any one lease during any one calendar year, or a total number of wells under any one lease in excess of the total number of forty (40) acre subdivisions of land held under such lease. As to lands found valuable for gas production only, the drilling obligation of the lessee shall be confined to a total number of wells equal to the total number of tracts comprising one hundred sixty (160) acres of land included in the lease, of which total number of wells the drilling of not more than one will be required in any one calendar year. However, notwithstanding the foregoing general rules, if wells drilled on land contiguous to the State lands require, in the discretion of the Department, greater diligence in drilling and a great-

er number of wells to be drilled on the State lands to protect the lease premises and deposits from loss, depletion or uncompensated drainage due to the wells on the contiguous lands, such greater diligence and greater number of wells may be required. All such requirements, however, shall be subject to, and shall not be inconsistent with, applicable rules, regulations and orders of the Oil and Gas Conservation Division of the Department of Natural Resources and Conservation.

h. Performance of well drilling operations as required by the foregoing rule may be suspended only by and with the consent of the Board during the time oil or gas previously discovered cannot be marketed at a profit, or for other good cause shown. When such suspension of drilling operations is deemed necessary and desirable by the lessee, the lessee shall submit a written statement of reasons therefor to the Board. If the requested suspension of drilling operations is approved by the Board, it shall issue to the lessee a statement or certificate authorizing the suspension for a time certain and require the lessee, within such time certain, to make written application to the Board for any further extension of the time in which such drilling operations may be suspended.

i. Upon the termination for any cause of any lease, the lessee has six months after the date of the termination to remove all machinery, fixtures, improvements, buildings and equipment belonging to him on the premises, except casing in any well capable of producing oil or gas and other equipment or apparatus necessary for the preservation of any well capable of producing oil or gas in quantities sufficient to pay for the operation of such well. With respect to any well which has not been completely plugged and abandoned by the lessee prior to the termination date, the lessee shall not remove casing or equipment from the well nor plug and abandon it without written approval from the Department for such action.

5. If upon the termination of any lease there is located on the lease a well capable of producing oil or gas and if the succeeding lessee, or in the event there is no succeeding lessee, the State, wishes to have the casing, equipment and apparatus necessary for preservation of the well left upon the premises, that party shall pay to the lessee under the terminated lease the reasonable value of such property. If the succeeding lessee or the Department is unable to agree with the former lessee upon the reasonable cash value of such casing, equipment and apparatus, the succeeding lessee or the State, as the case may be, shall pay in cash, to the former lessee a sum fixed as a reasonable price by a board of three (3) appraisers, one of whom shall be chosen by the succeeding lessee or the state, one by the former lessee, and the third by the two so chosen. Its appraisal shall be reported to the respective parties in writing, and is final and conclusive. Each party will pay the cost of the appraiser which it selects, and the parties will bear equally the cost of the third appraiser.

The former lessee may remain in possession and manage the land and property formerly covered by his lease until the value of the casing, equipment and apparatus which the succeeding lessee or the State desires to have left upon the premises is fixed in the manner provided in this section and has been paid to him in cash. During the time the former lessee remains in such possession, he may retain the same share of the products of the premises as insured to him during the term of his lease. Should the State or the succeeding lessee not desire any of the lessee's property as provided in these rules the lessee shall properly plug all wells and remove all of his property from the lands.

Any casing, machinery, fixtures, improvements, buildings and equipment belonging to any lessee and not removed within six (6) months after the date of termination of the lease shall, upon the expiration of the six (6)

months period become the property of the State. However, the claiming of such property from the lands, or any of such actions, shall not relieve the lessee of his obligation to properly plug and abandon all wells, to remove all debris and equipment from the lands, and to restore the premises to their condition prior to drilling operations as far as reasonably possible.

18. Lien on Production

The state shall have a first lien upon all oil or gas produced from the lands leased by any person pursuant to these rules to secure the payment of unpaid royalty and rental and other sums of money which may become due under the terms of that person's lease.

19. Hearings and Appeals

a. It is the desire and intent of the Board that any lessee, or prospective lessee, be given full and adequate opportunity to be heard with respect to any matter affecting the interests of the lessee in any particular lease. Any hearing will be conducted informally, without adherence to the strict rules of evidence of a court of law.

b. A verbatim, written record of any hearing or rehearing will be made if any party in interest so requests not less than five (5) days prior to the day set for hearing, and provided the requesting party agrees to pay the cost thereof, including the cost of the original copy of the transcript which shall become a part of the case record and remain on file with the Department. The party requesting such verbatim record may be required to deposit in advance the anticipated cost of the record. If such written record is made, it shall be certified as true, correct and complete.

20. Records

a. A separate file and record shall be

kept on each hearing held on application of a lessee or prospective lessee. Such separate file shall contain the written application for the hearing, a copy of the notice given which gives rise to the hearing, evidence of the mailing thereof, and the transcript of the hearing, if prepared.

b. The Department shall maintain a record of the publication of notices of all lease sales. Such record shall consist of published copies of such notices or affidavits of publication as provided in Section 93-1701-2, Revised Codes of Montana, 1947.

21. Fees

a. For application for oil and gas lease, \$10.00.

b. For filing each assignment affecting an oil and gas lease, or interest therein, of whatsoever nature, \$10.00.

22. Amendment of Rules and Regulations

These rules and regulations may be altered, changed or modified at any time by action in accordance with the Montana Administrative Procedures Act, Section 82-4201 et seq., R.C.M. 1947.

